

We Claim:

1. A method of producing starch, organic starch, or starch-containing products from starch-containing plant raw materials, which comprises performing an electric pulse method on the starch-containing plant raw materials.
2. The method according to claim 1, which comprises selecting the plant raw materials from the group consisting of potatoes, cereals, maize, waxy maize, and wheat.
3. The method according to claim 1, which comprises performing the electric pulse method at a field strength from 0.1 to 50 kV/cm.
4. The method according to claim 1, which comprises performing the electric pulse method at a field strength from 0.5 to 20 kV/cm.
5. The method according to claim 1, which comprises performing the electric pulse method at a field strength from 1 to 10 kV/cm.
6. The method according to claim 1, which comprises performing the electric pulse method with a pulse frequency from 1 to 2000 pulses per second.

7. The method according to claim 1, which comprises performing the electric pulse method with a pulse frequency from 5 to 1000 pulses per second.

8. The method according to claim 1, which comprises performing the electric pulse method with a pulse frequency from 5 to 100 pulses per second.

9. The method according to claim 1, which comprises performing the electric pulse method with an energy input from 1 to 100 kJ/kg raw material.

10. The method according to claim 1, which comprises performing the electric pulse method with an energy input from 2 to 75 kJ/kg raw material.

11. The method according to claim 1, which comprises performing the electric pulse method with an energy input from 5 to 50 kJ/kg raw material.

12. The method according to claim 1, which further comprises:

providing the plant raw material in broken form; and

subjecting the plant raw material to the electric pulse method while the plant material is in the broken form.

13. The method according to claim 1, which comprises selecting the plant raw material subjected to the electric pulse method from the group consisting of whole potatoes, potato grindings, maize mash, waxy maize mash, wheat, and starch slurries.

14. The method according to claim 1, which further comprises swelling the plant raw materials in a swelling solution containing less than 0.1% sulfur dioxide.

15. The method according to claim 14, wherein the plant raw materials include maize raw material.

16. The method according to claim 1, which further comprises swelling the plant raw materials in a swelling solution containing less than 0.01% sulfur dioxide.

17. The method according to claim 1, which further comprises swelling the plant raw materials in a swelling solution containing no sulfur dioxide.

18. The method according to claim 1, which further comprises preventing addition of SO₂.

19. The method according to claim 1, which further comprises preventing addition of biocides.

20. The method according to claim 1, which further comprises derivatizing the starch.
21. The method according to claim 1, which further comprises physically modifying the starch.
22. A starch product having a protein content below 0.05% in dry substance (DS).
23. A starch product having a protein content below 0.05% in dry substance (DS) obtained via the method according to claim 1.
24. A starch product, comprising maize starch and having a protein content below 0.2% in DS.
25. The starch product according to claim 24, further having a lipid content below 0.5% in DS.
26. A starch product, comprising potato starch and having a protein content from 0.01 to 0.05% in DS.
27. A starch product, comprising wheat starch and having a protein content below 0.1% in DS.
28. The starch product according to claim 27, having a lipid content of below 0.7% in DS.

29. The starch product according to claim 22, further comprising a starch forming less than 10 ml of sediment per 50 g of starch.

30. The starch product according to claim 29, wherein said starch forms less than 5 ml of sediment per 50 g of starch.

31. The starch product according to claim 23, having a starch content reduced by at least 50% compared to conventional starches not produced by the electric pulse method.

32. The starch product according to claim 23, having a starch content reduced by at least 80% compared to conventional starches not produced by the electric pulse method.

33. The starch product according to claim 23, having a starch content reduced by at least 95% compared to conventional starches not produced by the electric pulse method.

34. The starch product according to claim 29, wherein said starch is at least one of derivatized and physically modified.

35. A method of using starch products, which comprises:

providing the starch product according to claim 22; and using the starch product as a food additive.

36. The method according to claim 35, which further comprises using at least one organic starch as the starch product.

37. A method of using of using starch products, which comprises:

providing the starch product according to claim 22; and

treating a surface of paper with the starch product.

38. A method of using starch products, which comprises:

providing the starch product according to claim 22; and

using the starch product in a textile.

39. The method according to claim 38, which further comprises using the starch product as a printing thickener.

40. The method according of using starch products, which comprises:

providing a starch product according to claim 22; and

adding the starch product to a paper mass.

41. A method of using starch products, which comprises:

providing a starch product according to claim 22; and

producing at least one of a pharmaceutical preparation and a pharmaceutically applicable article with the starch product.

42. The method according to claim 1, which further comprises using at least one organic starch as the starch product.

43. The method of using organic starches, which comprises:

providing a starch product according to claim 22; and

using the starch product in a cosmetic.

44. The method according to claim 43, which further comprises using at least one organic starch as the starch product.